TABLE S7-27

# Correct answers to individual factual knowledge questions, by respondent characteristic: 2018

(Percent)

| (Percent)                                     |                                                         |                                                                                                        |                                                                                                             |                                                 |                                                                                                 |                                                                                                                                         |                                                                |                                                                                                                    |                                                   |                                                          |                                                                           |
|-----------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------|
| Characteristic                                | The<br>center of<br>the Earth<br>is very<br>hot. (True) | The continents have been moving their location for millions of years and will continue to move. (True) | Does the Earth<br>go around the<br>Sun, or does the<br>Sun go around<br>the Earth?<br>(Earth around<br>Sun) | All<br>radioactivity is<br>man-made.<br>(False) | It is the<br>father's gene<br>that decides<br>whether the<br>baby is a boy<br>or a girl. (True) | How long does it<br>take for the<br>Earth to go<br>around the Sun:<br>one day, one<br>month, or one<br>year? (One<br>year) <sup>a</sup> | Antibiotics kill<br>viruses as well<br>as bacteria.<br>(False) | Human beings, as<br>we know them<br>today, developed<br>from earlier<br>species of<br>animals. (True) <sup>b</sup> | Electrons<br>are smaller<br>than atoms.<br>(True) | Lasers work<br>by focusing<br>sound<br>waves.<br>(False) | The universe<br>began with a<br>huge<br>explosion.<br>(True) <sup>c</sup> |
| All adults (n = 1,175)                        | 86                                                      | 79                                                                                                     | 72                                                                                                          | 68                                              | 59                                                                                              | 54                                                                                                                                      | 50                                                             | 49                                                                                                                 | 46                                                | 44                                                       | 38                                                                        |
| Sex                                           |                                                         |                                                                                                        |                                                                                                             |                                                 |                                                                                                 |                                                                                                                                         |                                                                |                                                                                                                    |                                                   |                                                          |                                                                           |
| Male (n = 485)                                | 89                                                      | 82                                                                                                     | 80                                                                                                          | 74                                              | 49                                                                                              | 63                                                                                                                                      | 44                                                             | 52                                                                                                                 | 50                                                | 58                                                       | 42                                                                        |
| Female ( <i>n</i> = 690)                      | 84                                                      | 77                                                                                                     | 66                                                                                                          | 63                                              | 67                                                                                              | 48                                                                                                                                      | 54                                                             | 47                                                                                                                 | 42                                                | 34                                                       | 34                                                                        |
| Formal education                              |                                                         |                                                                                                        |                                                                                                             |                                                 |                                                                                                 |                                                                                                                                         |                                                                |                                                                                                                    |                                                   |                                                          |                                                                           |
| Less than high<br>school diploma<br>(n = 137) | 74                                                      | 59                                                                                                     | 56                                                                                                          | 49                                              | 35                                                                                              | 31                                                                                                                                      | 16                                                             | 34                                                                                                                 | 24                                                | 29                                                       | 37                                                                        |
| High school<br>diploma (n =<br>362)           | 83                                                      | 78                                                                                                     | 67                                                                                                          | 64                                              | 51                                                                                              | 46                                                                                                                                      | 40                                                             | 41                                                                                                                 | 35                                                | 39                                                       | 31                                                                        |
| Some college (n = 330)                        | 90                                                      | 85                                                                                                     | 73                                                                                                          | 67                                              | 60                                                                                              | 58                                                                                                                                      | 48                                                             | 52                                                                                                                 | 48                                                | 41                                                       | 32                                                                        |
| Bachelor's<br>degree (n =<br>232)             | 89                                                      | 84                                                                                                     | 81                                                                                                          | 79                                              | 74                                                                                              | 68                                                                                                                                      | 71                                                             | 61                                                                                                                 | 62                                                | 54                                                       | 48                                                                        |
| Graduate or professional degree (n = 114)     | 93                                                      | 85                                                                                                     | 88                                                                                                          | 86                                              | 85                                                                                              | 69                                                                                                                                      | 88                                                             | 53                                                                                                                 | 67                                                | 67                                                       | 51                                                                        |
| Science and mathe                             | matics educ                                             | ation <sup>d,e</sup>                                                                                   |                                                                                                             |                                                 |                                                                                                 |                                                                                                                                         |                                                                |                                                                                                                    |                                                   |                                                          |                                                                           |
| Low (n = 598)                                 | 82                                                      | 74                                                                                                     | 64                                                                                                          | 61                                              | 51                                                                                              | 44                                                                                                                                      | 39                                                             | 44                                                                                                                 | 34                                                | 37                                                       | 32                                                                        |
| Middle (n = 237)                              | 90                                                      | 83                                                                                                     | 74                                                                                                          | 72                                              |                                                                                                 | 59                                                                                                                                      | 56                                                             | 51                                                                                                                 | 52                                                | 47                                                       | 38                                                                        |
| High (n = 252)                                | 94                                                      | 92                                                                                                     | 91                                                                                                          | 84                                              | 75                                                                                              | 76                                                                                                                                      | 77                                                             | 61                                                                                                                 | 69                                                | 61                                                       | 49                                                                        |
| Family income (quartile) <sup>e</sup>         |                                                         |                                                                                                        |                                                                                                             |                                                 |                                                                                                 |                                                                                                                                         |                                                                |                                                                                                                    |                                                   |                                                          |                                                                           |
| Bottom ( <i>n</i> = 277)                      | 82                                                      | 76                                                                                                     | 63                                                                                                          | 59                                              | 47                                                                                              | 43                                                                                                                                      | 41                                                             | 55                                                                                                                 | 42                                                | 44                                                       | 35                                                                        |
| Third (n = 223)                               | 87                                                      | 82                                                                                                     | 73                                                                                                          | 64                                              | 58                                                                                              | 58                                                                                                                                      | 39                                                             | 43                                                                                                                 | 42                                                | 36                                                       | 33                                                                        |

# TABLE S7-27

# Correct answers to individual factual knowledge questions, by respondent characteristic: 2018

(Percent)

| (Percent)                     |                                                         |                                                                                                        |                                                                                                             |                                                 |                                                                                                 |                                                                                                                                         |                                                                |                                                                                                                    |                                                   |                                                          |                                                                           |
|-------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------|
| Characteristic                | The<br>center of<br>the Earth<br>is very<br>hot. (True) | The continents have been moving their location for millions of years and will continue to move. (True) | Does the Earth<br>go around the<br>Sun, or does the<br>Sun go around<br>the Earth?<br>(Earth around<br>Sun) | All<br>radioactivity is<br>man-made.<br>(False) | It is the<br>father's gene<br>that decides<br>whether the<br>baby is a boy<br>or a girl. (True) | How long does it<br>take for the<br>Earth to go<br>around the Sun:<br>one day, one<br>month, or one<br>year? (One<br>year) <sup>a</sup> | Antibiotics kill<br>viruses as well<br>as bacteria.<br>(False) | Human beings, as<br>we know them<br>today, developed<br>from earlier<br>species of<br>animals. (True) <sup>b</sup> | Electrons<br>are smaller<br>than atoms.<br>(True) | Lasers work<br>by focusing<br>sound<br>waves.<br>(False) | The universe<br>began with a<br>huge<br>explosion.<br>(True) <sup>c</sup> |
| Second ( <i>n</i> = 290)      | 87                                                      | 75                                                                                                     | 72                                                                                                          | 64                                              | 65                                                                                              | 54                                                                                                                                      | 48                                                             | 48                                                                                                                 | 46                                                | 38                                                       | 31                                                                        |
| Top (n = 287)                 | 91                                                      | 88                                                                                                     | 79                                                                                                          | 82                                              | 66                                                                                              | 64                                                                                                                                      | 70                                                             | 56                                                                                                                 | 53                                                | 56                                                       | 49                                                                        |
| Age (years)                   |                                                         |                                                                                                        |                                                                                                             |                                                 |                                                                                                 |                                                                                                                                         |                                                                |                                                                                                                    |                                                   |                                                          |                                                                           |
| 18-24 (n = 94)                | 90                                                      | 86                                                                                                     | 76                                                                                                          | 59                                              | 45                                                                                              | 67                                                                                                                                      | 34                                                             | 70                                                                                                                 | 48                                                | 41                                                       | 46                                                                        |
| 25-34 (n = 225)               | 89                                                      | 84                                                                                                     | 74                                                                                                          | 63                                              | 62                                                                                              | 61                                                                                                                                      | 50                                                             | 54                                                                                                                 | 48                                                | 43                                                       | 37                                                                        |
| 35-44 (n = 206)               | 90                                                      | 82                                                                                                     | 76                                                                                                          | 68                                              | 68                                                                                              | 55                                                                                                                                      | 49                                                             | 48                                                                                                                 | 45                                                | 39                                                       | 42                                                                        |
| 45-54 (n = 190)               | 86                                                      | 80                                                                                                     | 71                                                                                                          | 67                                              | 60                                                                                              | 53                                                                                                                                      | 50                                                             | 42                                                                                                                 | 47                                                | 50                                                       | 32                                                                        |
| 55-64 (n = 186)               | 84                                                      | 73                                                                                                     | 71                                                                                                          | 71                                              | 63                                                                                              | 51                                                                                                                                      | 56                                                             | 47                                                                                                                 | 45                                                | 48                                                       | 38                                                                        |
| 65 or older ( <i>n</i> = 269) | 80                                                      | 74                                                                                                     | 67                                                                                                          | 74                                              | 51                                                                                              | 45                                                                                                                                      | 54                                                             | 38                                                                                                                 | 38                                                | 42                                                       | 34                                                                        |
| Verbal ability <sup>f</sup>   |                                                         |                                                                                                        |                                                                                                             |                                                 |                                                                                                 |                                                                                                                                         |                                                                |                                                                                                                    |                                                   |                                                          |                                                                           |
| 0-4 (n = 256)                 | 78                                                      | 68                                                                                                     | 60                                                                                                          | 50                                              | 41                                                                                              | 37                                                                                                                                      | 20                                                             | 42                                                                                                                 | 29                                                | 32                                                       | 37                                                                        |
| 5 (n = 210)                   | 81                                                      | 77                                                                                                     | 65                                                                                                          | 60                                              | 57                                                                                              | 45                                                                                                                                      | 46                                                             | 45                                                                                                                 | 38                                                | 37                                                       | 30                                                                        |
| 6 (n = 254)                   | 88                                                      | 84                                                                                                     | 70                                                                                                          | 72                                              | 60                                                                                              | 53                                                                                                                                      | 48                                                             | 43                                                                                                                 | 45                                                | 41                                                       | 30                                                                        |
| 7 (n = 205)                   | 90                                                      | 84                                                                                                     | 81                                                                                                          | 73                                              | 65                                                                                              | 68                                                                                                                                      | 60                                                             | 48                                                                                                                 | 51                                                | 51                                                       | 40                                                                        |
| 8-10 (n = 250)                | 93                                                      | 86                                                                                                     | 85                                                                                                          | 85                                              | 75                                                                                              | 71                                                                                                                                      | 79                                                             | 65                                                                                                                 | 65                                                | 60                                                       | 49                                                                        |
| Correct answers to            | questions a                                             | bout basic scientific fact                                                                             | ts <sup>g</sup>                                                                                             |                                                 |                                                                                                 |                                                                                                                                         |                                                                |                                                                                                                    |                                                   |                                                          |                                                                           |
| Low (n = 227)                 | 52                                                      | 40                                                                                                     | 20                                                                                                          | 26                                              | 28                                                                                              | 5                                                                                                                                       | 12                                                             | 28                                                                                                                 | 16                                                | 13                                                       | 18                                                                        |
| Middle ( <i>n</i> = 512)      | 89                                                      | 82                                                                                                     | 70                                                                                                          | 64                                              | 53                                                                                              | 45                                                                                                                                      | 38                                                             | 52                                                                                                                 | 34                                                | 30                                                       | 31                                                                        |
| High (n = 436)                | 98                                                      | 95                                                                                                     | 99                                                                                                          | 92                                              | 81                                                                                              | 89                                                                                                                                      | 82                                                             | 54                                                                                                                 | 74                                                | 76                                                       | 54                                                                        |

<sup>&</sup>lt;sup>a</sup> Question was asked only of survey respondents who answered correctly that the Earth goes around the Sun. Individuals who responded incorrectly that the Sun goes around the Earth also counted as having responded incorrectly to the question on the length of the Earth's revolution around the Sun.

<sup>&</sup>lt;sup>b</sup> Question was asked of 794 survey respondents.

<sup>&</sup>lt;sup>c</sup> Question was asked of 404 survey respondents.

d For science and mathematics education, "low" equates to five or fewer high school and college science or mathematics courses, "middle" is six through eight courses, and "high" means nine or more courses.

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<sup>e</sup> Categories do not add to total *n* because "don't know" responses and refusals to respond are not shown.

f Measure is based on correct responses to a 10-item, multiple-choice test of vocabulary knowledge. Categories represent the number of correct responses.

<sup>g</sup> See notes to Table S7-1 for an explanation of the questions asked about basic scientific facts.

# Note(s)

Responses of "don't know" and refusals to respond are counted as incorrect and are not shown.

# Source(s)

NORC at the University of Chicago, General Social Survey (2018).

Science and Engineering Indicators